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Mark Version of Amended Claims

1. (Amended) In an electric guitar of the type that is strung with guitar strings that terminate with end caps, wherein the guitar has a body that defines a plurality of cylindrical string apertures that are sized to enable the guitar strings, but not the end caps, to pass therethrough, a device for preventing wear on each guitar string as it passes into one of the cylindrical string apertures [the strings of an electric guitar, of the type having string apertures in the electric guitar through which the strings pass], said device, comprising:

a tubular sleeve that defines a central conduit, said tubular sleeve [having]
including:

a neck section with an external diameter that enables said neck section to pass into any of the cylindrical string apertures [sized to fit within the string aperture of the electric guitar], and

a head section that is sized to be too large to pass through the string aperture,

wherein said [string aperture] central conduit is sized to enable a guitar string to pass therethrough;

whereby said tubular sleeve is placed in one of said cylindrical string apertures and the guitar string is strung through said central conduit of said tubular sleeve.

2. (Amended) The device according to Claim 1, wherein said central conduit expands within said head section, thereby creating a curved interior surface.

3. The device according to Claim 1, wherein said tubular sleeve is comprised of a

synthetic material.

4. (Amended) The device according to Claim 3, wherein said synthetic material is selected from a group consisting of Teflon, Kevlar and [Syrlin] Surlyn.

5. The device according to Claim 1, wherein said tubular sleeve is comprised of a soft metal selected from a group consisting of brass, bronze, tin alloys, aluminum, and aluminum alloys.

6. (Amended) In a guitar of the type having a body with a front surface and a back surface, wherein a plurality of string apertures extend through the guitar between the front surface and the back surface, wherein the guitar is strung by passing guitar strings with end caps through the string apertures, a method of reducing wear and stress on [a guitar string in an electric guitar, of the type having string apertures through which the guitar strings pass] guitar strings as they pass through the string apertures, said method comprising the steps of:

placing tubular sleeves within each of the string apertures in the electric guitar;
advancing the guitar strings through the tubular sleeves while stringing the guitar, wherein each of the guitar strings is biased against a tubular sleeve when the guitar is strung.

7. (Amended) The method according to Claim 6, wherein each tubular sleeve has a neck section that fits within [the] a string aperture of the electric guitar, and a head section that is too large to pass through the string aperture.

8. The method according to Claim 7, wherein said tubular sleeve defines a conduit

and said conduit expands within said head section, thereby creating a curved interior surface against which the guitar string bends when the guitar is strung.

9. The method according to Claim 6, wherein said tubular sleeve is comprised of a synthetic material.

10. (Amended) The method according to Claim 9, wherein said synthetic material is selected from a group consisting of Teflon, Kevlar and [Syrlin] Surlyn.

11. The method according to Claim 6, wherein said tubular sleeve is comprised of a soft metal selected from a group consisting of brass, bronze, tin alloys, aluminum, and aluminum alloys.

12. (Amended) A guitar, comprising:
a body having a front surface and a rear surface, wherein said body defines a plurality of [defining] string apertures that extend unobstructed between said front surface and said back surface;
a neck extending from said body;
tuning mechanisms supported by said neck;
replaceable tubular sleeves [placed within] lining said string apertures;
strings extending through said tubular sleeves in said string apertures to said tuning mechanisms, wherein said tuning mechanisms cause said strings to bend about and contact said tubular sleeves.

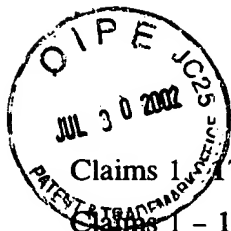
13. The guitar according to Claim 12, wherein each of said tubular sleeves has a neck section sized to fit within one of said string apertures and a head section that is sized to be too large to pass through that string aperture.

14. The guitar according to Claim 13, wherein each of said tubular sleeves defines a conduit through which one of the guitar strings pass, wherein each said conduit expands within said head section, thereby creating a curved interior surface against which the guitar string is biased by one of said tuning mechanisms.

15. The guitar according to Claim 12, wherein each of said tubular sleeves is comprised of a synthetic material.

16. (Amended) The device according to Claim 12, wherein said synthetic material is selected from a group consisting of Teflon, Kevlar and [Syrlyn] Surlyn.

17. The device according to Claim 12, wherein each of said tubular sleeves is comprised of a material that is softer than that of said guitar strings.



REMARKS

Claims 1 - 17 were pending in this application.

Claims 1 - 17 were rejected.

Claims 1, 2, 4, 6, 7, 10, 12 and 16 have been amended.

I. 35 USC 102 Rejections

The Examiner has rejected Claims 12 and 13 under 35 USC 102(b) as being clearly anticipated by U.S. Patent No. 5,477,764 to Carrico.

Claim 12

Claim 12 is an independent claim that sets forth a guitar. The guitar has a body with both a front surface and a rear surface. The body defines a plurality of string apertures that extend unobstructed between the front surface and said back surface. A neck extends from the body. Tuning mechanisms are supported by the neck of the guitar. Replaceable tubular sleeves line the string apertures in the guitar. The strings of the guitar extend through the tubular sleeves in said string apertures. The tuning mechanisms pull the strings taut and cause the strings to bend about and contact the tubular sleeves that line the string apertures.

The Carrico patent does not disclose the matter contained in Claim 12 of the present invention. The Carrico patent discloses a string anchoring system that functions very differently from the present invention. In the Carrico system, bores are drilled into the body of a guitar. A first cylindrical element (20) is threaded into the bore. The guitar strings is then threaded through a second cylindrical element (10). The second cylindrical element (10) is then inserted into the first cylindrical element (20) where it is held in place by either friction or a mechanical locking mechanism. Accordingly, the system disclosed by the Carrico patent cannot be retroactively added to an existing guitar unless a person wants to damage the guitar

by threading the second cylindrical elements (20) into the wood of the guitar.

The present invention is does not damage the structure of the guitar and can be added to any guitar that is strung through the body of the guitar.

As applied to the wording of Claim 12, the Carrico patent **does not disclose** a guitar body having string apertures that extend between the face surface of the body and the back surface of the body.

Furthermore, the Carrico patent **does not disclose** the use of replaceable tubular sleeves that line the string apertures as they extend between the front surface and back surface of the guitar body.

Since the matter contained in Claim 12 is clearly not disclosed in the Carrico patent, it is clear that the Carrico patent does not anticipate the matter of Claim 12 and it independent claims. The Examiner's rejection should therefore be withdrawn as being unsupported by the cited art.

II. 35 USC 103 Rejections

Claims 1-2 and 6-8 were rejected under 35 USC 103(a) as being unpatentable over German disclosure DE3924736 to Liebchen in view of Carrico.

The rejected Claims contain two independent claims, which are Claim 1 and Claim 6. Each of these claims is fully distinguishable from the cited references, as will be shown below.

Claim 1

Claim 1 sets forth a device for reducing wear in guitar strings in an electric guitar of the type that is strung with guitar strings that terminate with end caps. Such electric guitars have a body that defines a plurality of cylindrical string apertures that are sized to enable the guitar strings, but not the end caps, to pass therethrough.

The present invention device comprises a tubular sleeve that defines a central conduit.

The tubular sleeve has a neck section with an external diameter that enables said neck section to pass into any of the cylindrical string apertures in the guitar. The tubular sleeve also has a head section that is sized to be too large to pass through any of the cylindrical string apertures.

The central conduit defined by the tubular sleeve is sized to let the guitar string pass therethrough. The tubular sleeve is placed in one of the cylindrical string apertures and the guitar string is strung through the central conduit of the tubular sleeve. In this manner, the guitar string contacts only the tubular insert as the guitar string passes out of the cylindrical string aperture.

The Liebchen reference discloses a large block that is press fit into a slot that is carved in the face of a guitar. All of the guitar strings are attached to the block that is press fit into the guitar. As such, the Liebchen reference can only be used in a specialized guitar that can receive the large press fit block.

As applied to the wording of Claim 1, the Liebchen reference **does not disclose** any device that can be used on an electric guitar having traditional cylindrical string apertures. The Liebchen reference **does not disclose** the use of any tubular sleeve that passes into a traditional cylindrical string aperture of a guitar. Accordingly, the Liebchen reference in no manner discloses the matter of Claim 1 that specifically claims the structure of a tubular sleeve.

The Examiner cites the Carrico patent to address the many deficiencies of the Liebchen reference. However, as has already been stated, the Carrico patent **does not disclose** a guitar body having string apertures that extend between the face surface of the body and the back surface of the body.

Accordingly, in combination neither the Liebchen reference nor the Carrico patent disclose a tubular sleeve having a neck section that enables said neck section to pass into any of the cylindrical string apertures of a guitar. The Liebchen reference does not disclose any tubular sleeve and the Carrico patent only discloses a second cylindrical section (20) that must

be threaded into the material of the guitar.

Furthermore, neither the Liebchen reference nor the Carrico patent disclose a tubular sleeve that is placed in one of the cylindrical string apertures of a guitar, where the guitar is strung from the rear surface of the guitar through the central conduit of the tubular sleeve.

Since the matter contained in Claim 1 is clearly not disclosed in either the Liebchen reference or the Carrico patent, it is clear that the combination does not render obvious the matter of Claim 1 and its independent claims. The Examiner's rejection should therefore be withdrawn as being unsupported by the cited art.

Claim 6

Claim 6 sets forth a method of reducing wear and stress on guitar strings in a guitar of the type having a body with a front surface and a back surface, wherein a plurality of string apertures extend through the guitar between the front surface and the back surface. The guitar is strung by passing guitar strings with end caps through the string apertures.

The claimed method includes placing tubular sleeves within each of the string apertures in the electric guitar. The guitar strings are advanced through the tubular sleeves while stringing the guitar, wherein each of the guitar strings is biased against a tubular sleeve when the guitar is strung.

Neither the Liebchen reference nor the Carrico patent discloses a method of stringing the type of guitar mentioned in Claim 6. Furthermore, neither reference discloses the step of advancing strings through the claimed tubular sleeves while the guitar is being strung. Rather in both the Liebchen reference and the Carrico patent, the devices disclosed serve as the anchor to the guitar strings, they are not structures through which the guitar strings pass as the guitar is being normally strung.

Since the matter contained in Claim 6 is clearly not disclosed in either the Liebchen

reference or the Carrico patent, it is clear that the combination does not render obvious the matter of Claim 11 and its independent claims. The Examiner's rejection should therefore be withdrawn as being unsupported by the cited art.

Claims 15 and 16 were rejected under 35 USC 103 as being unpatentable over Carrico in view of U.S. Patent No. 4,535,670 to Borisoff.

Claims 15 and 16 depend from Claim 12. Claim 12 is distinguishable over the Carrico patent for the reasons previously presented. The addition of the Borisoff patent does not address the deficiencies of the Carrico patent as applied to the wording of Claim 12. The Borisoff patent is cited to show that mechanical string tensioners can have Teflon parts. The Borisoff patent in no manner shows a tubular sleeve that is used to reduce wear on strings in a conventional electric guitar at the point where the strings bend into the body of the guitar. Accordingly, the combination fails to disclose the matter of Claim 12 or any of its dependent claims.

Claim 17 was rejected under 35 USC 103 as being unpatentable over Carrico in view of U.S. Patent No. 5,227,571 to Cipriani.

Claim 17 depends from Claim 12. Claim 12 is distinguishable over the Carrico patent for the reasons previously presented. The addition of the Cipriani patent does not address the deficiencies of the Carrico patent as applied to the wording of Claim 12. The Cipriani patent is cited to show that guitar tension bridges can have metal parts. The Cipriani patent in no manner shows a tubular sleeve that is used to reduce wear on strings in a conventional electric guitar at the point where the strings bend into the body of the guitar. Accordingly, the combination fails to disclose the matter of Claim 12 or any of its dependent claims.

Claims 3-4 and 9-10 were rejected under 35 USC 103 as being unpatentable over Carrico or Liebchen in view of U.S. Patent No. 4,535,670 to Borisoff.

Claims 3-4 depend from Claim 1. Claims 9-10 depend from Claim 6. Claim 1 and Claim 6 are distinguishable over the Carrico patent and the Liebchen reference for the reasons previously presented. The addition of the Borisoff patent does not address the deficiencies of either the Carrico patent or the Liebchen reference as applied to the wording of the independent claims. The Borisoff patent is cited to show that mechanical string tensioners can have Teflon parts. The Borisoff patent in no manner shows a tubular sleeve that is used to reduce wear on strings in a conventional electric guitar at the point where the strings bend into the body of the guitar. Accordingly, the combination fails to disclose the matter of Claim 1, Claim 6 or any of their dependent claims.

III. DRAWINGS

The Official Draftsman's objections to the drawings have been noted. Formal drawings will be filed upon receipt of the Notice of Allowance for this application.

The Examiner has stated that Figure 2 should be designated as "Prior Art". This is confusing. According to the Applicant's papers, Figure 2 already is marked as being prior art.

IV. SUMMARY

Having fully distinguished the pending claims over the cited art, this application is believed to stand in condition for allowance. However, if the Examiner is of the opinion that such action cannot be taken, the Examiner is requested to call the applicant's attorney at (215) 321-6772 in order that any outstanding issues may be resolved without the necessity of issuing a further Office Action.

Respectfully Submitted,



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